

Abstract

A membrane separation process for the enrichment of at least one gas component in a gas flow, especially for the oxygen enrichment of the air and/or for the enrichment of carbon dioxide using a membrane separation device (10), which is a part of a membrane separation unit (2) and includes at least one membrane. The gas is separated into a retentate (8), which is discharged on the retentate side (12) of the membrane, and a permeate (9), which is discharged on the permeate side (11) of the membrane. To allow the separation of gases or the enrichment of a gas component in a gas flow at a low energy consumption rate and at low investment and production costs, the pressure of the gas stream is lowered before entering the membrane separation unit (2) so that pressure on the permeate side (11) is lower as compared with the inlet pressure.